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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,609	01/16/2001	Andy L. Lee	174/188	5825

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EXAMINER

KIM, HONG CHONG

ART UNIT PAPER NUMBER

2186

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/761,609

Applicant(s)

LEE ET AL.

Examiner

Hong C Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-28 is/are allowed.
- 6) ☒ Claim(s) 1-5, 15-18 and 29-32 is/are rejected.
- 7) ☒ Claim(s) 6-14 and 33-35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**Detailed Action**

1. Claims 1-35 are presented for examination. This office action is in response to the amendment filed on 5/13/04.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 15-18, and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seltzer et al. (Seltzer) U.S. Patent 4,833,651 in view of Williams et al. (Williams) U.S. Patent 5,084,841.

As to claim 1, Seltzer discloses FIFO circuitry comprises first (Fig. 1 Ref 14) and second counter (Fig. 1 Ref. 16) circuitries respectively counting write and read clock signals (Fig. 1 WC and RC), subtractor circuitry (Fig. 1 Ref. 18); and shift register circuitry (Fig. 1 Ref. 12) shifting in write data words in synchronism with the write clock (Fig. 1 Ref. 20) and outputting one of those data words (Fig 1 Ref. 8). However, Seltzer does not specifically disclose gray code counters.

Seltzer discloses gray code counters (Fig. 2 Refs. 25 and 22) for the purpose of eliminating any decoding glitch (col.2 lines 60-63).

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Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to replace binary system with gray code system as taught by Williams into the system of Seltzer for the advantages stated above.

As to claims 2-4, Williams further discloses detector circuitry, empty condition, and full condition (Fig. 2 Refs. 41-43).

As to claim 15, claim 15 is a rephrasing of claim 1 in a program logic device apparatus. The claim is rejected for the same reason as set forth above. Also Williams further discloses a program logic device (Fig. 1A Ref. 12).

As to claim 16, Williams discloses the invention as claimed in the claim 1. Williams further discloses a data processing system (Fig. 1A, Refs 11 and 15).

As to claims 17 and 18, Williams discloses the invention as claimed in the claim 16. Williams further discloses a printed circuit board (Fig. 1A Ref. 12, FIFO reads on this limitation).

As to claim 29, Seltzer and Williams disclose the invention as claimed. Williams further discloses gray code subtractor circuitry (Fig. 2, comparator and Ref. 4xs') comprises shift register circuitry receiving and shifting in a first data signal (Fig. 1A, data

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write side) and decoder circuitry receiving a second data signal (Fig. 1A, data read side).

As to claims 30-31, Seltzer further discloses first and second circuitries configured to produce data (Fig. 1, write and read circuitries).

As to claim 32, Williams further discloses a first and a second clocks (Fig. 2, Write clock and Read clock).

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Seltzer et al. (Seltzer) U.S. Patent 4,833,651 in view of Williams et al. (Williams) U.S. Patent 5,084,841 further in view of Computer System Architecture Prentice Hall, Inc., 1976, M. Morris Mano pp 97-98.

As to claim 5, Seltzer and Williams disclose the invention as claimed in the above. However, neither Seltzer nor Williams specifically discloses first counter circuitry counts at twice the write clock rate.

Mano discloses first counter circuitry counts at twice the write clock rate (least significant digit for the binary code in table 3-5, which alternates every two cycle reads on this limitation, see page 6 lines 28- page 7 in the applicant specification) for the purpose of generating glitch free gray code.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include first counter circuitry counts at twice the

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write clock rate as taught by Mano into the combined invention of Seltzer and Williams for the advantages stated above.

***Allowable Subject Matter***

Claims 6-12 and 33-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 19-28 are allowed.

***Response to Amendment***

Applicant's arguments filed on 5/13/04 have been fully considered but they are not deemed to be persuasive.

Applicant's remarks that the references not teaching a shift register with a write clock signal is not considered persuasive.

Seltzer discloses a shift register (Fig. 1 and Fig. 2 64x8 Dual Port Ram, since data input is shift into the RAM every WC) with a write clock signal (Fig.1 WC, write clock).

Applicant's remarks that the references not teaching PLD is not considered persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., PLD) are not recited in the rejected claims. Although the claims are interpreted in

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light of the specification, limitations from the specification are not read into the claims.

See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Therefore broadly written claims are disclosed by the references cited.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

When responding to the office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. He or she must also show

how the amendments avoid such references or objections. See 37 C.F.R. ' 1.111(c).

When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Hong Kim whose telephone number is (703) 305-3835. The Examiner can normally be reached on the weekdays from 8:30 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matt Kim, can be reached on (703) 305-3821.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.



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The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to TC-2100:**

Official (703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121  
Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

HK   
Primary Patent Examiner  
July 23, 2004